CLAIMS

WHAT IS CLAIMED IS:

1. A traffic noise barrier system for use alongside a path of traffic, the traffic noise barrier system comprising:

a longitudinal barrier including:

a front surface facing the path of traffic,

a top surface adjacent the front surface, and

a back surface opposite the front surface;

a traffic noise barrier wall supported by the longitudinal barrier and spaced apart from the back surface in a direction away from the path of traffic.

2. The traffic noise barrier system of claim 1, wherein the traffic noise barrier wall includes:

a plurality of upstanding posts spaced apart from the back surface of the longitudinal barrier in the direction away from the path of traffic, and

a plurality of panels supported by the plurality of upstanding posts.

3. The traffic noise barrier system of claim 2, further comprising:

a plurality of transverse beams extending from the longitudinal barrier to the plurality of upstanding posts for supporting the traffic noise barrier wall.

4. The traffic noise barrier system of claim 3, further comprising:

a structure disposed across the plurality of transverse beams for catching debris falling between the longitudinal barrier and the traffic noise barrier wall.

5. The traffic noise barrier system of claim 4, wherein the structure is a grating plate formed from a rigid material.

6. The traffic noise barrier system of claim 2, wherein each panel in the plurality of panels is interconnected by a cable to at least one of an adjacent panel and an upstanding post.

7. The traffic noise barrier system of claim 2, wherein at least one panel in the plurality of panels is transparent.

8. The traffic noise barrier system of claim 2, wherein the at least one panel is infused with fibers.

9. The traffic noise barrier system of claim 2, wherein adjacent upstanding posts in the plurality of upstanding posts are interconnected by at least one of a bar and a cable extending between the adjacent upstanding posts.

10. The traffic noise barrier system of claim 9, wherein the adjacent upstanding posts are interconnected by a segmented tubular bar having a cable disposed therein, the segmented tubular bar including a plurality of segments separated by expansion joints for allowing relative movement of the segments.

11. The traffic noise barrier system of claim 1, wherein the front surface is configured to redirect an errant vehicle , and, in a region extending from the top surface of the longitudinal barrier to about 78 inches above a terrain surface of the path of traffic, the traffic noise barrier wall is positioned at a distance greater than about 18 inches from a vertical plane disposed at the front surface of the longitudinal barrier.

12. The traffic noise barrier system of claim 11, wherein the longitudinal barrier is qualified under National Cooperative Highway Research Program Report 350 Test Level 3.

13. The traffic noise barrier system of claim 1, wherein the front surface is configured to redirect an errant vehicle , and, in a region extending from the top surface of the longitudinal barrier to about 96 inches above a terrain surface of the path of traffic, the traffic noise barrier wall is positioned at a distance greater than about 34 inches from a vertical plane disposed at the front surface of the longitudinal barrier.

14. The traffic noise barrier system of claim 13, wherein the longitudinal barrier is qualified under National Cooperative Highway Research Program Report 350 Test Level 4.

15. The traffic noise barrier system of claim 2, wherein the upstanding posts are configured to break upon impact by a vehicle.

16. The traffic noise barrier system of claim 1, wherein the traffic noise barrier wall is entirely supported by the longitudinal barrier.

17. A traffic noise barrier system for use alongside a path of traffic, the traffic noise barrier system comprising:

a longitudinal barrier including:

a front surface facing the path of traffic,

a top surface adjacent the front surface, and

a back surface opposite the front surface;

a traffic noise barrier wall supported by the longitudinal barrier and spaced apart from the back surface in a direction away from the path of traffic; and

a plurality of transverse beams each having a first end coupled to the longitudinal barrier and a second end coupled to the traffic noise barrier wall for supporting the traffic noise barrier wall.

18. The traffic noise barrier system of claim 17, further comprising:

a structure disposed across the plurality of transverse beams for catching debris falling between the longitudinal barrier and the traffic noise barrier wall.

19. The traffic noise barrier system of claim 17, wherein the traffic noise barrier wall includes:

a plurality of upstanding posts; and

a plurality of panels supported by the plurality of upstanding posts, each panel in the plurality of panels being interconnected by a cable to at least one of an adjacent panel and an upstanding post.

20. The traffic noise barrier system of claim 17, wherein the traffic noise barrier wall includes:

a plurality of transparent panels.

21. The traffic noise barrier system of claim 17, wherein the panels are infused with fibers.

22. The traffic noise barrier system of claim 17, wherein the traffic noise barrier wall includes:

a plurality of upstanding posts; and

a plurality of panels supported by the plurality of upstanding posts, and wherein adjacent upstanding posts in the plurality of upstanding posts are interconnected by at least one of a bar and a cable extending between the adjacent upstanding posts.

23. The traffic noise barrier system of claim 17, wherein the front surface is configured to redirect an errant vehicle , and, in a region extending from the top surface of the longitudinal barrier to about 78 inches above a terrain surface of the path of traffic, the traffic noise barrier wall is positioned at a distance greater than about 18 inches from a vertical plane disposed at the front surface of the longitudinal barrier.

24. The traffic noise barrier system of claim 23, wherein the longitudinal barrier is qualified under National Cooperative Highway Research Program Report 350 Test Level 3.

25. The traffic noise barrier system of claim 17, wherein the front surface is configured to redirect an errant vehicle , and, in a region extending from the top surface of the longitudinal barrier to about 96 inches above a terrain surface of the path of traffic, the traffic noise barrier wall is positioned at a distance greater than about 34 inches from a vertical plane disposed at the front surface of the longitudinal barrier.

26. The traffic noise barrier system of claim 25, wherein the longitudinal barrier is qualified under National Cooperative Highway Research Program Report 350 Test Level 4.

27. The traffic noise barrier system of claim 19, wherein the adjacent upstanding posts are interconnected by a segmented tubular bar having a cable disposed therein, the segmented tubular bar including a plurality of segments separated by expansion joints for allowing relative movement of the segments.

28. The traffic noise barrier system of claim 19, wherein the upstanding posts are configured to break upon impact by a vehicle.

29. The traffic noise barrier system of claim 17, wherein the traffic noise barrier wall is entirely supported by the longitudinal barrier.

30. A traffic noise barrier system for use alongside a path of traffic, the traffic noise barrier system comprising:

a longitudinal barrier including:

a front surface facing the path of traffic,

a top surface adjacent the front surface, and

a back surface opposite the front surface;

a traffic noise barrier wall including:

a plurality of upstanding posts spaced apart from the back surface of the longitudinal barrier by at least 30 inches in a direction away from the path of traffic, and

a plurality of panels supported by the plurality of upstanding posts; and

a plurality of transverse beams each having a first end coupled to the longitudinal barrier and a second end coupled to the traffic noise barrier wall for supporting the traffic noise barrier wall.

31. The traffic noise barrier system of claim 30, further comprising:

a structure disposed across the plurality of transverse beams for catching debris falling between the longitudinal barrier and the traffic noise barrier wall.

32. The traffic noise barrier system of claim 30, wherein at least one panel in the plurality of panels is transparent.

33. The traffic noise barrier system of claim 30, wherein the at least one panel is infused with fibers.

34. The traffic noise barrier system of claim 30, wherein the adjacent upstanding posts are interconnected by a segmented tubular bar having a cable disposed therein, the segmented tubular bar including a plurality of segments separated by expansion joints for allowing relative movement of the segments.

35. The traffic noise barrier system of claim 34, wherein the upstanding posts are configured to break upon impact by a vehicle.

36. The traffic noise barrier system of claim 30, wherein the traffic noise barrier wall is entirely supported by the longitudinal barrier.

37. A traffic noise barrier system for use alongside a path of traffic, the traffic noise barrier system comprising:

a longitudinal barrier including:

a front surface facing the path of traffic and configured to redirect an errant vehicle,

a top surface adjacent the front surface, and

a back surface opposite the front surface;

a traffic noise barrier wall including:

a plurality of upstanding posts spaced apart from the back surface of the longitudinal barrier, adjacent upstanding posts in the plurality of upstanding posts are interconnected by at least one of a bar and a cable extending between the adjacent upstanding posts, and

a plurality of panels supported by the plurality of upstanding posts, each panel in the plurality of panels is interconnected by a cable to at least one of an adjacent panel and an upstanding post; and

a plurality of transverse beams each having a first end coupled to the longitudinal barrier and a second end coupled to the traffic noise barrier wall for supporting the traffic noise barrier wall,

wherein, in a region extending from the top surface of the longitudinal barrier to about 96 inches above a terrain surface of the path of traffic, each upstanding post in the plurality of upstanding posts is positioned at a distance greater than about 34 inches from a vertical plane disposed at the front surface of the longitudinal barrier.

38. The traffic noise barrier system of claim 37, wherein the panels are infused with fibers.

39. The traffic noise barrier system of claim 37, wherein the adjacent upstanding posts are interconnected by a segmented tubular bar having a cable disposed therein, the segmented tubular bar including a plurality of segments separated by expansion joints for allowing relative movement of the segments.

40. The traffic noise barrier system of claim 37, wherein the longitudinal barrier is qualified under National Cooperative Highway Research Program Report 350 Test Level 4.

41. The traffic noise barrier system of claim 37, wherein the upstanding posts are configured to break upon impact by a vehicle.

42. The traffic noise barrier system of claim 37, further comprising:

a structure disposed across the plurality of transverse beams for catching debris falling between the longitudinal barrier and the traffic noise barrier wall.

43. The traffic noise barrier system of claim 37, wherein the traffic noise barrier wall is entirely supported by the longitudinal barrier.

44. The traffic noise barrier system of claim 37, wherein at least one panel in the plurality of panels is transparent.